

What is claimed is:

1. A lead comprising:
a lead body extending from a proximal end to a distal end; and
an electrode coupled to the lead body;
wherein the lead body and the electrode each have an outer surface adapted to passively prevent formation of clots on the outer surfaces.
2. The lead of claim 1, wherein the outer surface of the lead is textured so as to form a pseudo-intimal layer on the outer surface.
3. The lead of claim 1, wherein the lead body includes at least a portion seeded with endothelial cells or stem cells.
4. The lead of claim 1, wherein the lead body material includes a phospholipid polymer.
5. The lead of claim 1, wherein the outer surface of the electrode includes a textured coating or surface.
6. The lead of claim 5, wherein the electrode includes a coating including titanium microspheres.
7. The lead of claim 6, wherein the titanium microspheres are dimensioned to attract circulating blood cells so as to develop a uniform and tightly adherent biologic surface.

8. The lead of claim 1, wherein the lead body includes an amino acid sequence attached to a polymer, the amino acid sequence chosen to bind to cell receptors.
9. The lead of claim 1, wherein the outer surface of the lead does not include any active coatings which elute from the surface to minimize clotting.
10. The lead of claim 1, wherein the lead is coupled to a pulse generator and is adapted for delivering cardiac resynchronization therapy.
11. A lead comprising:
 - a lead body extending from a proximal end to a distal end; and
 - an electrode coupled to the lead body;
 - wherein the lead body has a textured outer surface adapted to passively prevent formation of clots on the outer surface; and
 - wherein the electrode includes an outer textured surface including microspheres.
12. The lead of claim 11, wherein the electrode outer surface is adapted to trap blood cells within the textured surface to form a layer of blood cells on the electrode surface.
13. The lead of claim 11, wherein the microspheres are titanium microspheres.
14. The lead of claim 11, wherein the outer surface of the lead does not include any active coatings which elute from the surface to minimize clotting.
15. The lead of claim 11, wherein the lead outer surface is inherently non-thrombogenic.

16. The lead of claim 11, wherein the lead is coupled to a pulse generator and is adapted for delivering cardiac resynchronization therapy.
17. A lead comprising:
 - a lead body extending from a proximal end to a distal end;
 - an electrode coupled to the lead body; and
 - means for passively preventing formation of clots on the electrode and the lead body.
18. The lead of claim 17, wherein means for passively preventing includes a microsphere outer surface coating on at least a portion of the electrode.
19. The lead of claim 17, wherein means for passively preventing includes at least a portion of the lead body having an outer surface seeded with endothelial cells or stem cells.
20. The lead of claim 17, wherein means for passively preventing includes the lead body having an outer surface including a phospholipid polymer material.
21. A method comprising:
 - implanting a lead in a left chamber of a heart, the lead having a non-eluting, bio-passive, non-thrombogenic outer surface;
 - coupling the lead to a pulse generator; and
 - delivering electrical pulses to the heart through the lead.
22. The method of claim 21, wherein delivering electrical pulses includes delivering CRT therapy to the heart.

23. The method of claim 22, wherein delivering CRT therapy includes sensing heart conditions through the lead.